Executive Regulation
Office of the County Executive
Montgomery County, Maryland

Subject: Adoption of the 1996 National Electrical Code
Originating Department: DEPARTMENT OF ENVIRONMENTAL PROTECTION
Number: 6-96
Effective Date: January 31, 1997

Montgomery County Regulation on:

ADOPTION OF THE 1996 NATIONAL ELECTRICAL CODE

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF DEVELOPMENT SERVICES AND REGULATION

Issued by County Executive
Regulation # 6--96

Authority: Code Section 17-2 and 17-3
Supersedes: Executive Regulation No. 21-94
Council Review: Method 2 under Code Section 2A- t 5
Register Vol. 13 , Issue 5

Comment Deadline: May 31, 1996
Effective date: January 31, 1997
Sunset date: None

SUMMARY:
This regulation adopts the National Electrical Code, 1996 Edition, with local amendments. This regulation applies to all electrical equipment, installations and activities within the County.

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BACKGROUND:
This regulation supersedes Executive Regulation #21-94 and adopts the 1996 National Electrical Code which is used nationwide. The 1996 National Electrical Code (NFPA No. 70-1996) was adopted by the National Fire Protection Association at its annual meeting held May 25, 1995, in Denver, Colorado. On the day it becomes effective, this regulation supersedes Executive Regulation #21-94 and all previously promulgated references to the National Electrical Code.

Section 1.
In accordance with procedures authorized in Chapter 17, Sections 17-2 and 17-3, "Electricity," Montgomery County Code, 1994, as amended (the code), the following executive regulations apply to all electrical equipment, installations, and activities within Montgomery County.

Section 2.
Unless otherwise noted, all references to the National Electrical Code (hereafter referred to as NEC) contained in this regulation are to The National Electrical Code (NFPA No. 70-1996) by the National Fire

Protection Association at its annual meeting held May 25, 1995, in Denver, Colorado. This regulation supersedes all previously promulgated references to the NEC.

Section 3.

The 1996 NEC is adopted as the Electrical Code of Montgomery County, and all electrical Installations and equipment must meet the standards and requirements set forth in that code or in this regulation. The 1996 NEC is incorporated by reference as if that code were fully set forth with the following additions, deletions, and amendments.

Whenever the provisions of this regulation and those of the NEC are in conflict, the provisions of this regulation will govern and be enforced in the County. The Director is solely responsible for the interpretation of these regulations as amended.

Section 4.

ARTICLE 100 DEFINITIONS

Add the following definition after the definition of "Appliance," as provided in Article 100:

Appliance, Fixed: An appliance which is fastened or otherwise secured at a specific location.

Amend the definition of "Building" as follows:

Building: A structure which stands alone or which is separated from adjoining structures by fire walls conforming to the definition and requirements of the BOCA National Building Code for fire walls.

Section 5.

Section 210-5. Add new subsection (c) as follows:

210-5(c). Ungrounded Conductor. Where installed in raceways, as open work or as concealed knob-and-tube work. ungrounded conductors must be identified by a color other than as specified in (a) or (b) above. All ungrounded conductors of the same color must be connected to the same ungrounded feeder conductor, and the conductors for systems of different voltages must be of different colors.

Exception. As permitted in Section 200-7.

For basic single- and three-phase wiring systems of 120/208/240 volts: 3-wire circuits must use 1 black, 1 white, and 1 red wire; 4-wire circuits must use 1 black, 1 white, 1 red, and 1 blue wire. For basic single- and three-phase wiring systems of 277/480 volts, the colors gray, brown, orange, and yellow must be used in accordance with commonly accepted trade practices.

Section 6.

Section 210-8(b). Add the following new subsection (3):

Section 210-8(b)(3). Within 6 feet (1.83 m) of a wet bar or other sinks.

Section 7.

Section 21-19(b), Exception No 2. Delete and substitute the following:

Section 210-19(b), Exception No. 2. Each wall-mounted oven and each counter-mounted cooking unit must be served by an individual circuit of copper wire. The conductor size is based on 100 percent of the nameplate rating of the unit, but cannot be smaller than size No. 10.

Section 8.

Section 210-52(a). Add the following after the "Exception":

General lighting branch circuits in dwellings must not have more than 12 power-consuming outlets. A duplex receptacle is considered to be one outlet. Smoke detectors are not considered power-consuming devices for counting purposes.

Section 210-52(b)(3). Add the following paragraph:

A general appliance branch circuit in a dwelling must not have more than eight receptacle outlets. A duplex receptacle is considered to be one outlet.

Section 210-52(e). Add the following sentence:

When an addition is made to an existing dwelling which has no outside ground-fault circuit-interrupter (GFCI) receptacle, a GFCI protected receptacle, accessible at grade level, must be installed on the outside of the new addition.

Section 9.

Section 220-4(a). Add the following sentence and exceptions to subsection (a):
Each fixed appliance must be served by an individual branch circuit.
Exception No. 1: Electric baseboard heaters.
Exception No. 2: Appurtenant equipment to furnaces, such as humidifiers and electronic air cleaners.
Exception No. 3: Other equipment having motors rated 1/4 hp or less.

Section 10.
Section 230-40; Exception No. 1: DELETE EXCEPTION NO. 1.

Section 11.
Subsections 230-42(b)(1) and 230-42(b)(2). Substitute "150 amperes" for "100 amperes" as the minimum service ampacity for single-family dwellings.

Section 12.
Section 230-71 (a). Delete the paragraph after the word "general", and add the following:
Multiple services may be installed as permitted under Sec. 230-2; no more than six service disconnecting means are allowed per building, regardless of the number or services installed.

Section 13.
Subsection 230-79 (c). Substitute "150 amperes" for "100 amperes" as the minimum service disconnecting means rating for single-family dwellings.

Section 14.
Article 250-81 (c). Delete and substitute the following:
All new structures, both residential and commercial, require a concrete encased electrode to be used as the principle grounding element. A concrete encased electrode is an electrode encased by at least 2 inches (50.8 mm) of concrete located within and near the bottom of a concrete foundation or footing that is in direct contact with the earth, consisting of at least 20 feet (6.1 m) of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods of not less than 1/2 inch (12.7mm) diameter, or consisting of at least 20 feet (6.1m) of bare solid copper conductor not smaller than No.4 AWG. Steel reinforcing rods and/or copper conductors must be supported in the trench to insure 2 inches (50.8mm) separation from earth and requires a minimum of 2 feet (0.61 mm) of accessible length after installation. Any connection between the grounding electrode and the grounding conductor is considered a splice and is permitted by means of irreversible compression-type connectors listed for the purpose or by the exothermic welding process. If a rod with a zinc galvanized finish is used, a bronze or brass clamp listed for the purpose may be used to attach the grounding conductor.

Section 15.
Section 300-15(b). Delete Exception No. 4 in its entirety, including all references following this exception. These references include, but are not limited to, Sections 336-15, Exception No. 2; 545-10; 550-10(j); and 551-47-E. Exception No. 1.

Section 16.
Section 310-5. Delete and substitute the following:
Section 310-5: The minimum size of conductors must be as shown in Table 310-5, except that the minimum size of aluminum and copper-clad aluminum conductors must be No. 2, and the use of aluminum conductors is limited to service entrance and feeder applications only.
Note: No exceptions to sizes of wire as enumerated here or elsewhere in the code will be allowed in the case of aluminum conductors.

Section 17.
Section 336-5(a)(1). Delete the subsection in its entirety including the Exception, and substitute the following: "(1) in any dwelling or structure exceeding a total of four floors."

Section 18.
Section 410-16(c). Delete and substitute the following:
410-16(c). Suspended Ceilings All fixtures installed in suspended ceilings must be supported from the building structure directly. If wire is used for this purpose, no less than 2 separate wires of size No. 12 (or larger) steel must be used. These wires must extend from opposite corners of the fixture with each wire independently attached to the building structure.

Exception: If the fixture is circular, and not more than 24 inches in diameter, at least one wire of No. 12 steel or larger must be used to support the fixture.

Section 19.

Add a new Section 424-15 as follows:

424-15. Wiring. Wiring for all fixed electric space-heating equipment must be copper.

Section 20.

Section 440-62(c). Delete and substitute the following:

440.62(c). Each individual room air-conditioning unit, regardless of its current rating, must the served by an individual circuit of not less than No. 12 copper wire, and must terminate in a single receptacle.

Section 21.

Section 518-4. Delete Exception No. 1.

Section 22.

Section 680-20(a)(1). Delete and substitute the following:

680-20(a)(1). Underwater lighting fixtures must be supplied by a GFCI protected transformer operating at no more than 15 volts.

Section 23.

Section 700-17. Add two new paragraphs as follows:

700-17. Any building in which standpipes are installed must have one 30-ampere, 120-volt circuit installed for each standpipe riser, supplied from the emergency panel. The wiring method for exposed work must be galvanized, threaded metal conduit. Boxes must be metal, weatherproof types with gasketed flap-door covers and threaded hubs. The wiring method for concealed work must be metal conduit with appropriate galvanized boxes having gasketed flap-door covers suitable for fire department use. The weatherproof cover must be suitable for receiving the L5-20R NEMA type twist-lock receptacle without damage (e.g., Bell # 128-226 cover or equivalent).

Supply wiring must be at least 75 degrees C-type wire. One single 20-ampere three-wire twistlock receptacle (NEMA L5-20R) must be installed at least as high as, and with a 2-feet offset from EACH HOSE VALVE CONNECTION. Each cutlet box must be painted “fire-alarm red” in color and be marked “Only for Fire Department Use."

Note: This Section supersedes the requirements of Table 210-21(b)(2).